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## INTANGIBLE ASSETS IMPAIRMENT TEST ISSUES: THE CASE OF A BRAZILIAN TELECOMMUNICATIONS COMPANY

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**Abstract:** National and international regulatory agencies by issuing new standards have tried to bring the accounting recorded values near to economic values. Nevertheless, it is understood that the latter carry a deeper level of subjectivity, on the grounds that completely new values will be obtained by the adoption of different conditions. This study aims to perform a comparative analysis between two company valuation methods: the Discounted Cash Flow and the Residual Income Valuation while performing the impairment test. The study case uses the database prepared by a telecommunications company to its subsidiary in the Internet sector for the purpose of the impairment test assessment. Some points have been identified as deserving special attention in a company's valuation assessment, namely the discount rate and the growth rate. The results show that: 1) a firm's economic value is sensitive to the use of a sole growth rate to calculate the perpetuity, considering that any changes in the rate will alter the decision based on the test; 2) the setup of a discount rate as a parameter in a firm's valuation assessment is a fundamental point for the write-off decision resulting from an impairment test.

**Keywords:** Intangible assets. Impairment. Cash Flow. Residual Income.

### 1 INTRODUCTION

Despite the severe criticism that it frequently receives, Accounting usually adopts entry values (historical cost) for a company's equity valuation. Those values are used in the preparation of the accounting statements for external users, as they grant easier identification (practicability) and verifiability (objectivity).

However this tendency has been changed for some items, which are now valued for its fair value, as it is the case of financial instruments. According to the International Accounting Standards Committee<sup>1</sup> (IASC, 2000, *apud* MARTINS, 2001), the fair value is not for assets valuation only, but "it is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable economic agents, each one of them looking for the best satisfaction of their own interests."

According to this organism, the fair value is reliable in three situations: (1) when there is a public price quotation in an active public securities market; (2) when there is an asset price divulged by an independent rating agency and the future cash flow of this item can be reliably estimated; and (3) when there is a proprietary evaluation model and the data used can be reliably estimated, i.e., the data are obtained in active markets (MARTINS, 2001).

Aware of this tendency, the Financial Accounting Standards Board (Fasb) has issued statements (SFAS) trying to bring the values as measured by accounting near to those considered to be “fair” (fair values), related to balance sheet items. For instance, SFAS 142 does not consider that intangible assets ever loses utility, and regards not just the goodwill but also the other intangible assets as having an endless life and, hence, they should not be amortized. This treatment opposes that of APB<sup>2</sup> 17, which proposed an arbitrary amortization to the goodwill due to its utility loss because it was considered to have finite useful life.

SFAS 144, which superseded SFAS 121, established a unique accounting model, based on the one proposed by SFAS 121, while keeping the requirements to recognize and to measure the loss value of long-lived assets only if the accounting value of the asset was no longer recoverable by its undiscounted cash flow. In those situations, the assets shall be tested, at least annually, to verify their utility loss (impairment test). Thus, the impairment test is the comparison made between the carrying amounts of intangible assets and their respective fair values, in a way that, if the carrying amounts exceed the fair value, an impairment loss is recognized in profit and loss.

Likewise, the *Comissão de Valores Mobiliários* (CVM) has issued the Normative Instruction IN 371/2002, known as deferred fiscal recovery test, in order to allow the companies to verify if their fiscal credits are recoverable or not when matched with their future profits expectations, a procedure that could be accounted as an impairment test, despite it had not received this denomination by the normative instruction referred to.

Taking this into account, it must be remarked that the fair value assessment of financial instruments is an easier task as long as the market can evaluate those instruments. Nevertheless, for long-lived assets said that does not apply. The latter

must be measured by other valuation methods. Thus, a more appropriated methodology must be sought, in order to determine the market value of those items.

Despite the fact that the concept of calculating a company's value using one of the many economic valuation models available is widely accepted, because those models are considered to be the closest one can get to a company's real value, it should be remarked that all of them carry some subjectivity that can raise unavoidable questions, such as: which model should be used? Which growing rate shall be considered? Which discount rate better reflects a company's cost of capital? Which scenario was used to assess the company (growth, normal growth, low growth or recession)?

Therefore, the changes issued by FASB and CVM, through their statements, SFAS 142 and 144 and IN/CVM 371/2002, respectively, face problems derived from the economic subjective valuation, as completely different numbers result from the assumption of different conditions.

In view of this, this study aims to perform a comparative analysis between the results obtained in the impairment test performed by a company of the telecommunications industry (thereafter: Telecom) that used the Discounted Cash Flow approach to the ones that would be obtained using the Residual Income Valuation method.

The company in focus has recently acquired a participation in the capital of an Internet company (thereafter: NET). In order to guarantee the confidentiality of the information, the names of the companies and the amounts of the transaction were made fictitious.

The present study is justified because notably there is an effort on the part of the regulatory bodies to bring the values registered by accounting close to the economic values, which have a higher level of subjectivity. That is exactly the point that this paper takes into consideration, in order to give the user the possibility to perceive the advantages or disadvantages of the adoption of the above-mentioned method.

The implementation of the case study was carried out with data provided by Telecom as it had already performed the impairment test using the discounted cash flow method, using projected scenarios and their respective impact on the company's decision-making process. An independent auditing firm also evaluated those tests.

## **2 COMPANY VALUATION AND THE IMPAIRMENT TEST**

As mentioned before, intangible assets and long-lived assets are subject to the impairment test, according to SFAS 142 and SFAS 144, respectively, and the deferred fiscal credit, according to IN/CVM 371/2002. Those statements give some instructions regarding the issue, as presented in the following topics.

### **2.1 Goodwill**

SFAS 142 states that a registered intangible asset will be amortized along its useful life for presentation purposes, unless its useful life should be considered to be undefined. The useful life of a company's intangible asset is the period over which that asset, directly or indirectly, contributes for its future cash flows. If the asset has a finite useful life that is not previously known it will be amortized over the best estimation of its useful life.

Goodwill impairment test comprehends a two-step process: the first step compares the fair value of the operational segment to its carrying amount, including the goodwill, so as to verify potential utility losses. If the fair value of the goodwill exceeds its implicit fair value, an impairment loss equal to the value in excess should be recognized.

The fair value may be defined as the amount for which assets or liabilities could be bought or sold in a current transaction between parties willing to negotiate, i.e., with the exemption of a forced sale or an involuntary liquidation. Therefore, the fair value of an operational segment refers to the value by which a business unity as a whole may be bought or sold in a current transaction between agents willing to do it. (SANTOS; SCHMIDT, 2007)

If an intangible asset is being amortized and lately its useful life is considered to be undefined, it should be tested for impairment, that is, this intangible asset that was being amortized should be accounted for in the same way as the other intangible assets that are not subjected to amortization.

After the impairment loss is recognized, the adjusted carrying amount of the intangible asset will be its new cost basis and reversions of impairment losses previously recognized will not be permitted.

According to the FASB, the present value method is frequently the best available technique for fair value estimates of a group of net assets, the operational segment not included.

## **2.2 Long-lived assets**

When the company gathers information indicating that the carrying amount of its long-lived assets are recorded in the accounting in excess of its market value, or that the expected future benefits to be generated by this asset is below the value originally estimated, the company must perform tests to demonstrate that the asset's market value is inferior to the asset's carrying amount.

That test is denominated impairment test and it is basically used to verify potential reduction in recoverable amounts of long-lived assets. If an asset's recoverable amount is lower than its carrying amount, the asset's fair value will be calculated. Therefore, the impairment loss is the difference between the asset's carrying amount and fair value when the latter is the smallest. When the company realizes that this unrecoverability has happened, it shall record an impairment loss in its balance sheet.

SFAS 144 paragraph 8 indicates that a long-lived asset must be tested for its recoverability every time events or changes in the environment indicate that its carrying amount may not be recovered. Consequently, the accounting value of a long-lived asset, or of a class of assets, will be considered as not recoverable when it exceeds the sum of the undiscounted future cash flow generated by this asset through its utilization or write-off.

According to paragraph 14 of SFAS 144, the impairment loss that results from the application of this statement, if any, will only reduce the carrying amount of the long-lived asset of the class of assets. This loss is recognized in the income statement, and the fixed asset after this reduction is the new cost basis that is subject to depreciation. SFAS 144 paragraph 15 states that "restoration of a previously recognized impairment loss is prohibited".

## 2.3 Deferred fiscal asset

Deferred fiscal asset accounting is based on the company's going concern, as well as the expectation of positive future results (IN/CVM 371/2002, Article 2, Item II and Deliberation CVM 273/98 – item 019).

In view of this, the company must undertake a technical viability study with the future cash flow projection for a maximum of ten-year period discounted to the present value, as well as its profitability history (IN/CVM 371/2002, Article 2, Item I and Deliberation CVM 273/98 – item 004)

For the deferred fiscal credit calculation current fiscal rules of Decree 3.000/99 (RIR/99) must be observed in relation to additions and exclusions fiscal profit or loss, which may recorded off-balance sheet in the Real Profit Measurement Ledger (LALUR).<sup>3</sup>

After its recognition, the deferred fiscal asset must be recorded in the balance sheet separately under Receivables or Long Term Liabilities according to the calculated value (Deliberation CVM 273/98, items 035 e 036).

The deferred fiscal asset recognition only will not be carried out under Receivables or Long Term Liabilities when there is uncertainty regarding the entity's operational going concern or under circumstances where the deferred fiscal asset registration is not appropriate (Deliberation CVM 273/98 – item 019).

Nevertheless, no matter which form of recognition is chosen, it must be clear that the it is the administration's responsibility to evaluate how to disclose and present the event to stakeholders (Deliberation CVM 273/98 – item 019).

Finally, the observance of the above-mentioned deliberation demands the periodical reevaluation of those deferred fiscal assets, especially in the event of changes in economic scenario and/or in rates that served as previous parameters (items 28 and 29).

Therefore, the task of valuating the equity items as well as the business itself is a kernel piece for the realization of the tests in season. Hence, the study considers questions that are naturally raised in the process which deserve attention and appraisal, considering its importance for the refereed value attribution of the valuation in question and, consequently, the write-off decision regarding the assets tested for impairment.

## **2.4 Telecom's valuation – Study methodology and considerations**

The valuation of a company is necessary not only for legal purposes, but it is undeniable that during the ordinary operations of a company is more than natural that the administration would like to know the business's value or the worth of company under its control. The creation of value for the shareholders or for the partners is mandatory, because they would not be willing to finance an entity that wastes value.

The issue of company valuation is an old theme. There are controversies regarding the idea of value, that is, which value are we focusing in: accounting value, financial value, economic value or even social value.

An attempt to calculate the value in economic terms always faces subjective aspects. Even the accounting valuation, subject to conservative ideas, may also use different estimates, which are by definition subjective, for instance, general provisions related to collateral and receivables, depreciation estimates, etc. The closer the valuation approximates to an asset's economic aspect – when we want to know the expectations regarding future utilities and benefits of an item – the more complicated it gets. In such a situation, the value of all variables used for the valuation models shall be estimated. Needless to say those estimations always involve arguments and debates.

Regarding that, even if a single technique is adopted, the results will raise questioning which will differ from individual A to individual B, according to their personal interests in the company. Therefore, the task of attributing value to a company, especially the modern company, became increasingly difficult. This difficulty increases even more if we consider market volatility, notably in the industry analyzed in this study, which adds to the subjectivity that is implicit to key items of valuation: adopted method, company's growth rate and discount rate.

The methodology used in this study is the Residual Income Valuation, according to which the company value equals the sum of the present value of the future residual profits plus the net equity calculated in accordance with the traditional accounting criteria.

The Residual Income Valuation method or the supranormal profit (ALR) has the classic study of Edwards and Bell (1961) as a cornerstone. The ALR method partially uses accounting values to calculate the company worth based on the



residual income concept. This model express the company value as the addition of its net equity, as calculated by traditional accounting, to the discounted present value of the residual profits generated by its future operations, according to the equation below:

$$p_t = b_t + \sum_{\tau=1}^{\infty} R^{-\tau} E_t(x_{t+\tau}^a)$$

where:

$b_t$  is assumed to represent the PL's accounting value at time  $t$ ;

$x_{t+\tau}^a$  denotes residual values in future periods,  $t + \tau$  ( $\tau = 1, 2, \dots, \infty$ ).

This equation shows that company value can be split in two: one accounting measure of the invested capital ( $b_t$ ) and a measure of the expected values of residual profits ( $\sum_{\tau=1}^{\infty} R^{-\tau} E_t(x_{t+\tau}^a)$ ), being the latter part defined as the present value of future results flow not yet added to the current accounting net equity, because they were not yet realized.

This means that if the company gets future results at a rate that equals its expected rate of capital remuneration the present value of the future residual profits will be zero (the latter represented by the discount rate "r"), i.e., if the company neither creates nor destroys wealth it will have as a valuation value the accounting value of its net equity. Therefore, the residual profit of time "t" is defined as the amount the company generates in excess to the discount rate used over the accounting value of the net equity of the previous period (t-1).

According to Silva (2007), "the idea of residual profit is simple and powerful" and that in practice the discounted cash flow method is more complex and difficult to be used than what is expected to be. Besides, White et al, 1997, cited by this author, presents the following justification for using the residual income valuation method:

The company valuation method based on its residual profit at least has a great advantage in terms of how precise is its outcome. While the discounted cash flow works with a 100% of future estimated values, the residual income valuation uses as a part of valuation the asset's value as it's obtained by accounting. Considering a company where 60% of its value is represented by its accounting value, one may affirm that the model will have to work with residual profit estimations that will carry a 40% bias of imprecision.

As a consequence, in order to disclosure the company value, and due to the necessary requirements for using the impairment test, the above-mentioned

methodology was chosen. The reason for this is that the outcome of the residual income valuation method is identical to the discounted cash flow (DCF) method, as long as the assumptions are also coherent (OHLSON, 1999).

Consequently, it is inferable that the results obtained by the methodology used in this paper will be equivalent to the result obtained by the DCF method, used by Telecom. As a consequence, it is necessary to verify the conditions used concerning future cash-flows valuation and estimation. Those items will be analyzed in the following sections, and will be used as a basis for comparative tests, described in section 4 of this paper (results).

#### **2.4.1 Future cash flows estimation and adopted discount rates**

According to what was presented previously, the company valuation involves the subjective determination of the value of all variables for its calculation, e.g., the possible scenarios (recession, low growth, normal or high growth).

Despite that fact that the present study uses the projected future cash flows of Telecom, it was evidenced that the company did not carry out projections in different scenarios, i.e., the report of future cash flows was based on a single scenario.

Notwithstanding the use of a probability distribution method, with the projection of flows based on scenarios (bearish, probable and bullish), is an advisable part of an impairment test application, its absence will be partially compensated during the analyses with the different discount rates used.

The utilization of a probability distribution method is important not just for the company's valuation but, especially, as an analytical tool to support strategy definition which, as a consequence, is contributive because raises questions regarding all variables, no matter they are endogenous or exogenous, its critical success factors (CSF) and its points of failure (SPOF) for the projection made (Shoemaker, 1995; Porter, 1990; Gil 2004).

As a contributor for the discussion of variables to be used, the discount rate used becomes an issue. A widely used discount rate is the one that considers a weighing between the cost of capital and the cost of debt (Weighted Average Cost of Capital – WACC) used by the company in the managerial study.

An onerous liability was not identified, that is, loans and financings and as a consequence there were no need for capital weighting. Besides, the company estimates negative results for the 2007 and 2010 period, and for that reason, it was not necessary to take into account the financial benefit of the income tax and the social welfare contribution over the financial expenses net profit, considering that in those periods the company will not be able to usufruct this benefit because it will not pay those taxes.

Again, regarding the WACC concept itself, there is a conceptual flaw, according to Martins and Martins (2003, p. 5), where:

the assets must be measured by their value as if they were financed only by equity ( $K_e$ ), in theory superior to the cost of debt ( $K_d$ ). This will result, as a rule, in an asset's value independent of the capital composition financing it and usually lower than the one calculated by the WACC

Hence, regarding the WACC's conceptual flaw, the following consideration must be made: the company's capital structure as for today will be the same for the future periods?

Corroborating with the conceptual flaw of the above-mentioned method, the calculation is made based on the existing presented structure that invariably will suffer modifications during its future activities.

Therefore, the use of own capital maybe the most adequate mean to obtain the present discount value either for the future cash flows or the estimated accounting and/or economic results. That cost will be the one used in the impairment test.

In order to calculate the equity cost of capital, a choice has to be made related with the risk-free tax added to the company's and/or industry's risk, the latter being expressed by the Beta ( $\beta$ ).

Ross, Westerfield & Jaffe (2002, p. 262) states that: "the company's beta estimation based on its past data may sound natural [...], however, frequently its reasoned that a better estimation of the beta may be done using the company's industry".

Regarding the author's affirmation, two dimensions must be observed as regards the present's study reality. First, the company Net does not have the required conditions to calculate its beta ( $\beta$ ). On the other hand it must be considered the industry's company beta ( $\beta$ ). According to information from the website

<http://www.damodaran.com> the calculated beta for the Internet's industry is 2,46. For this calculation, the research included 329 most important company of the sector.

The equity's cost of capital is 27,19% per year, corresponding to the risk-free rate plus a risk premium corresponding to the application of a risk rate of 14,66% per year and of the industry's Beta of 2,46 and corrected by the Brazilian estimated inflation rate of 4,40.

Despite of the theoretical background, the above-mentioned Beta substantially raises the equity's cost of capital of the company resulting in a rate not used by the market for the present's scenario analysis.

Thus, in order to better capture the reality of the company and the rates used by the market an weighted average of the Beta of the 10 biggest companies of the internet's industry with shares negotiated at Nasdaq stock exchange was used, as presented at Table 1:

**Table 1** – 10 biggest companies of the Internet industry

<b>Company Name</b>	<b>Ticker Symbol</b>	<b>Industry Name</b>	<b>Exchange Code</b>	<b>Firm Value</b>	<b>Value Beta</b>
Google Inc.	GOOG	Internet	NDQ	\$140.738,50	1,05
eBay Inc.	EBAY	Internet	NDQ	\$42.245,00	1,1
Yahoo! Inc.	YHOO	Internet	NDQ	\$35.302,50	1,45
Amazon.com	AMZN	Internet	NDQ	\$18.063,30	1,25
E*Trade Fin'l	ETFC	Internet	NDQ	\$11.866,80	1,85
VeriSign Inc.	VRSN	Internet	NDQ	\$5.899,40	2,05
Trend Micro Inc	TMIC	Internet	NDQ	\$3.964,20	0,9
CheckFree Corp.	CKFR	Internet	NDQ	\$3.605,60	1,8
F5 Networks Inc	FFIV	Internet	NDQ	\$3.059,20	1,6
ValueClick Inc	VCLK	Internet	NDQ	\$2.324,80	1,2
<b>Beta (<math>\beta</math>) Médio Encontrado</b>					<b>1,425</b>

**Source:** Available at <http://www.damodaran.com>. Accessed in Feb 2007

The referred criteria becomes useful for the present study due to the representativity of the sampled chosen companies that eliminates the less representative ones and, as a consequence, naturally raises the Beta risk.

A value of 18,77% equity's cost of capital is obtained when a Beta of 1,425 is used with the same previous parameters. Weighting the above-mentioned considerations, and over all the present economic scenario shared by the companies, the 18,77% per year turns to be appropriate for this study. However, simulations will be made with the following rates: 22,88% (equity's cost of capital

calculated by Telecom); 17,20% (WACC calculated by Telecom adjusted by the calculated equity's cost of capital); and 27,19% per year, the latter being the equity's cost of capital adjusted by the industry's Beta.

#### **2.4.2 Growth rate**

Macroeconomic indicators become a very delicate matter for the future cash flow projections and considering the inherent risk present on these indicators, there is a call for prudence while projecting the company's flows in order to work with the possible economic scenarios.

Despite the possibility of full occurrence of the projected scenario, one item deserves some emphasizes due to the feasibility of its nonoccurrence which is the adopted condition for the company's growth rate in the sensibility's analysis of the Net Present Value (NPV).

Telecom has projected 4 scenarios for the company's growth in perpetuity: 8%, 9%, 10% and 11%, each of them carrying a 25% probability of occurrence. This resulted in a weighted average rate of 9,30% for the perpetuity's discounted flows, from year 2016 on. This is a very high rate especially for the projected scenario where the company achieves its business maturity.

### **3 METHODOLOGY**

This study case was done with a big company of the telecom's industry that has the majority of the capital of an important Internet's company.

According to Yin (2005, p. 33) "the study case as a research's strategy comprises a method that involves everything from the logic of planning, the data collection technique and the specific approach for their analysis."

The data's planning and collection for this study began with Telecom's management reports analyses. The first analyzed report related to the intangibles and goodwill valuation's made by an independent auditing company by the time Telecom acquired Net's shares.

The second analyzed report was the impairment test made by Telecom's controlling department that has elaborated the future cash flows for 2006 to 2016,

with results based on the discounted cash flows method. Telecom used only one growth scenario and the WACC for the calculation of the discount rate used to project the cash flows.

With regard to the specific analysis approach, procedures adopted by Telecom was the focus, raising and arguing about points that deserved special attention when elaborating the company's valuation, e.g., the discount and growth rates and the company's valuation method itself. Such points were theoretically presented in the previous section and will serve as a support for the following considerations and analyses presented following item – Results.

The company's valuation method was based on data collected from the cash flow's management reports elaborated by Telecom in the period of 2006 the 2016, using the residual profit's methodology where the company's value is equal to the present value of its future residual profits and the net equity calculated according the traditional accounting criteria.

Besides the company's valuation calculation through the Residual Income Valuation Method the use of four rates for discounting purposes was attempted in order to analyze the effect provoked by different rates in the impairment test.

The above-mentioned process tries to fulfill the study's objective of comparing the company's valuation obtained through the Residual Income Valuation and the Discounted Cash Flows methods, specifically with regards to the impairment tests.

## **4 RESULTS**

Based on the theoretical framework of the present study, this section aims to describe, remark and analyze Telecom's the report results regarding de impairment tests for the intangibles assets, the goodwill and the differed fiscal asset.

All the considerations presented here seek to weigh market's practices and scenarios with the constructed theoretical background in order to obtain results that contribute with the company's decision making process and with and its disclosure to the stakeholders.

#### **4.1 Analysis of Telecom's adopted proceedings for the differed fiscal asset impairment test**

As mentioned in section 2.3 of this study the differed fiscal asset accounting bases on the premise of the company's going concern as well as its future positive results expectation (IN/CVM 371/2002, Article 2<sup>nd</sup>, Item II and CVM Deliberation 273/98 - item 019) that must be supported in a, as well as its yield's history.

Regarding the technical viability study's elaboration, as well as the presentation of the future expectation of positive results, the elaboration of conditions had been made in accordance with the study's requirements (with exception for items commented on the present study), when elaborating a study, the projection of the future flows of box is highly recommendable for the company, by means of the scenarios analysis' methods (ROSS, WESTERFIELD & JAFFE, 2002).

According to the authors (op. cit., p. 176) "when a high net present value is finally achieved, the temptation is to accept the project immediately [...] despite that, the projected cash flow generally does not materialize itself in the practical one, and the company finishes with a damage."

Therefore, the projection of future cash flows based on economic scenarios is wise because such exogenous variable may affect the expected company's yield, or even increase the expected/projected loss.

As regards to the company's yield history, which is required for the differed fiscal asset impairment test, the analysis was prejudiced as the available financial statements and reports related to the released future cash flows referred only to the period from 2006 to 2016. However, since the company has not had positive yields in three of the five last years (that must be effectively occurring), such item need no reference at all. This assumption is base on article 3<sup>rd</sup> of IN/CVM 371/2002, which states that: "A company's history of profitability is presumed to not have occurred if a taxable profit has not happened in three of the last five social exercises".

Regarding the differed fiscal asset verification, at its beginning the report states that for the observance of the IN/CVM n° 371 the Fiscal Profit or Loss was projected for each year-base in order to calculate the value of the income tax (25%) and social contribution (9%) as regards to the differed net profits.

Despite the report has mentioned the occurrence of additions and exclusions in compliance with Articles 249 and 250 of Decree 3,000/99, the LALUR<sup>3</sup> requirements presents only total values from 2007 on, including the balance of R\$ 7,18 million, what has partially harmed the analysis.

Based on the premise that the related accumulated balance of year 2007 is correct, all values added and compensated are in compliance with the Demonstration of the year-end results, as well as its fiscal compensation, based on Article 510 of Decree 3,000/99, that establishes the limit of 30% of the exercise's profit for the fiscal compensation accomplishment.

The compensation will start in the 2011 year-base, as the company has only projected losses until 2010, with a calculated total value of R\$ 8,46 million (up to 2010).

Although the company has calculated the differed fiscal asset and evidenced it in the year-end results demonstration, the fact that it has not classified the related values in the balance sheet deserves attention - item: long term liabilities. As previously mentioned, IN/CVM 371/2002 and Deliberation CVM 273/1998 base on the premise that, for the recognition of the differed fiscal asset, the company must expect future positive results (IN/CVM 371/2002, Article 2<sup>nd</sup>, Item II and Deliberation CVM 273/98 – item 019).

Under this reasoning, if the company has this expectation, it will have to register separately its balance sheet the differed income tax and the social contribution, in the long-term liabilities, as stated items 35 and 36 of Deliberation CVM 273/98.

However, such deliberation mentions the possibility of the company to judge not necessary the recognition of the differed fiscal asset. That is the situation when there are doubts in relation to the company's on going concern or to circumstances where the register of the differed fiscal asset is not necessary.

If one of the two mentioned situations is the case, (regarding the on going concern or the obligatory registration) there is a real obligation that this is evidenced on the company's reports, stating clearly the reasons for not recognizing the differed fiscal Asset. This fact is of utmost importance, since the observance of full disclosure for the shareholders demands a constant update of the company's procedures and,



above all, there shall lingers no doubts regarding the accounting registers and publications.

## 4.2 Intangibles assets, *goodwill* and long-lived assets impairment test

As previously said, in order to compare with Telecom's study, the Residual Income Valuation Method was used in this analysis. The equity value was obtained by the addition of Net's book value of R\$ 4,40 million, as of 31.12.2006, to the economic future results present value (or residual profits) expected by the company throughout its existence and discounted to the same date using the discount rate of 18,77% per year. In section 4.4, the same tests are carried out using three different discount rates of 27,19%, 22.88% and 17.20% per year.

Table 2 below demonstrates the company's value calculation based on the income valuation method:

Table 2 - Company's Value Calculation with the Residual Income Valuation Method (RIV)

	2.007	2.008	...	2.016	FCP <sup>5</sup>
RI <sup>1</sup>	-3,042	-1,866	...	8,923	137,245
PV <sup>2</sup> of RI (31.12.2006)	-2,561	-1,323	...	1,598	24,571
<b>BV<sup>3</sup> (31.12.06)</b>	<b>23,563</b>				
<b>Fair Value (31.12.06)</b>	<b>27,969</b>				
<b>Fair Value (DFC<sup>4</sup>)</b>	<b>40,281</b>				
<b>Difference</b>	<b>-12,311</b>				

<sup>1</sup> RI – Residual Income (values in US\$ thousands)

<sup>2</sup> PV – Present Value

<sup>3</sup> BV – Book Value of Equity

<sup>4</sup> DFC – Discounted Cash-flows

<sup>5</sup> FCP – Cash-flows on Perpetuity

As observed in Table 2, the company's value using the discount rate of 18,77% per year, is R\$ 27,96 million, R\$ 12,31 million lower than Telecom's value of R\$ 40,28 million. In the impairment test Net's economic value calculated as above must be compared with the Net's book value (see Table 3 below).

Table 3 – Book value in 2004

Specification	31.12.2006
Net's economic value with discount rate of 18,77% per year	27,969
Net's book value projected from Nov to Dec/06, as informed by Telecom	14,048
Goodwill non recognized at Telecom's balance sheet	13,921
(in US\$ thousands)	

ASAA - Advances in Scientific and Applied Accounting, v.3, n.3, p.290-310, 2010.

Since the Net's economic value exceeds by R\$ 13,92 million its respective net equity, – under the discount rate of 18,77% per year – there included the goodwill acquired when Net was acquired by Telecom (R\$ 8,54 million), there is no need for write-off of the goodwill recognized by Telecom.

Regarding the impairment test for the two other recognized intangibles assets and for the long-lived assets, totaling R\$ 2,71 million (R\$ 1,48 million for intangibles and R\$ 1,23 million for the long-lived assets), there is a cushion in the goodwill not recognized, of R\$ 13,92 million, to absorb the equity recognition of these assets (R\$13,92 > R\$ 2,71 + 8,54). Thus, it is concluded that, under the discount rate of 18,77% per year, it is not necessary to write-off any of the assets submitted to the impairment test. All these results are summarized in Table 4 to follow:

**Table 4 – Intangibles and long-lived assets impairment tests**

<b>Specification</b>	<b>Values</b>
Economic Value calculated by the residual income valuation method – discount rate: 18,77% (1)	27,969
Accounting Net Equity plus Net's acquisition agio (2)	14,048
<b>(=) Unrecognized Goodwill [(3) = (1) – (2)]</b>	<b>13,921</b>
Recognized intangibles	
Acquired goodwill (Net's acquisition agio) (4)	8,544
Other recognized intangible assets (Trademark and Customer's relationship) (5)	1,487
<b>(=) Intangibles' impairment test balance, according to SFAS-142: (6) = (3) - (4 + 5)</b>	<b>3,889</b>
Long-lived assets, including the deferred asset (7)	1,227
<b>(=) Balance for Long-lived Assets impairment test, according to SFAS 144 (6 – 7)</b>	<b>2,663</b>
(in US\$ thousands)	

### 4.3 Impairment test for the deferred fiscal asset (fiscal credit)

The same logic of excess of the economic value over the book value is used to verify if the differed fiscal asset (Tributary Credit), whose recognized value in Telecom's balance sheet is R\$ 2,45 million, as of 31.12.2006. This value is slightly different from that one used by Telecom in its report for the impairment test – R\$ 2,52 million. As the difference of R\$ 2,66 million, after all the impairment tests required, is still superior to the recognized tributary value of R\$ 2,45 million it is not even necessary a partial write-off of the tributary credit under the discount rate of 18,77% per year assuming that it can be settled against the future expected results. Table 5 below resumes this result.

**Table 5 – Fiscal credit impairment test**

<b>Specification</b>	<b>Values</b>
Remaining balance, after impairment tests required by SFAS 142 and SFAS 144	2,663
(-) Fiscal credit recognized at Net balance net in 31.12.2006	2,454
Fiscal credit impairment test (IN/CVM 371/2002)	208

(in US\$ thousands)

#### 4.4 Impairment test under three additional discount rates

Following the same reasoning there has been made the tests with the rates previously mentioned for the three others scenarios. The new company's values are presented in Table 6.

**Table 6 – Goodwill's *Impairment* tests (Scenarios 2, 3 e 4)**

	<b>27,19%</b>	<b>22,88%</b>	<b>17,20%</b>
Economic Value da Empresa.....	7,260	14,000	37,593
Accounting Value .....	14,048	14,048	14,048
<b>Test.....</b>	<b>-6,788</b>	<b>-48</b>	<b>23,545</b>

(in US\$ thousands)

Under the discount rates of 27,19% and 22,88% per year, the net equity surpasses the company's economic value of the company, therefore demanding the write-off of the assets submitted to the impairment tests. For the discount rate of 17,20% per year, since this rate is lower than the rate of 18,77% per year used in the tests of the previous section, the assets' impairment is not necessary.

Should a discount rate of 27,19% per year is used, Net's accounting Profit and Loss would have to be reduced by R\$ 6,78 million. As it is impossible to determine the individual contribution of each group of assets in Net's global economic value, the impairment loss should be accounted following one of the two alternatives below:

- (1) to write-off all the impairment loss of the recognized agio value;
- (2) to proportionally distribute the loss to all the assets submitted to impairment test.

When the discount rate of 22,88% per year is used to deduct the future residual profits, Net's equity would have to be reduced by R\$ 0,05 million only. In this case it would be more rational for Telecom to choose to recognize this average loss against one of the three assets submitted to impairment test.

## 5 CONCLUSIONS

The report presented by Telecom to subsidize the impairment calculation of the assets related to its participation in Net, has considered only a growth rate of the business in the perpetuity, from year 2016 on of 9,3%. It is said “only” because, despite the use of four different scenarios (8%, 9%, 10% and 11%), it is implicit in the calculation that these different situations would occur under the same probability of occurrence, i.e. 25% for each one. It is considered to be a sufficiently strong premise. It is evidenced that Net’s Economic Value, base for the impairment tests of all the assets that by the accounting norms the test is demanded, is sufficiently sensible to the of growth rate of the profit in the perpetuity. Should it be lower the impairment would be needed, total or partial according to the magnitude of the rate’s reduction.

Another factor that decisively influences the studied impairment tests is the rate used to discount the projected profits to the present value. Telecom used a single scenario of a nominal rate of 17% per year. This tax signs implicitly a relatively low business risk, considering that it is only 4% superior to the risk-free rate effective today in Brazil. On the other hand, considering the historical industry’s risk, given by a group of companies of the same sector of Net, it was verified that this risk can be very bigger as the average Beta of 2,46 denotes. Applying this Beta for Net’s equity’s cost of capital, a discount rate of 27,19% per year is obtained. If this rate is used to discount the future flows an immediate recognition of a great impairment loss would be necessary. The use of an intermediary discount rate, of 22,88% per year, for a industry’s Beta of 1,93, would lead to an immediate recognition of a residual impairment loss of R\$ 0,05 million. Should the two other discounting rates of 17,20% and 18,77% per year be maintained there would have no need for recognition of impairment losses for none of the groups of asset where this is required.

For the analysis it was considered that Net’s economic projections calculated by Telecom, for years 2006 to 2016, and from this last year to perpetuity, was restricted to the capital participation of Telecom in Net. This condition was assumed because it was not verified a minority’s participation in the projected balance sheets presented. If this condition does not verify it is necessary to apply Telecom’s percentage of participation in Net’s not recognized goodwill (excess of the economic value to the net equity registered), what would result in an impairment loss for the

long-lived asset and a tributary credit for conservative discount rates, as that one used in Telecom's report.

Assuming that the previous paragraph condition verifies, it is recommended that the results presented in Telecom's report are preserved, i.e., not to recognize any impairment loss at this moment, keeping a close eye in the future periods. Should 2007's projections not verify by the end of this year, or the future year's expectations worsen, then immediate loss recognition should be made.

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<sup>1</sup> Nowadays, International Accounting Standard Boards (IASB).

<sup>2</sup> Accounting Principles Board, editados pelo American Institute of Certified Public Accountants (AICPA).

<sup>3</sup> A form to calculate the fiscal profit demanded by the Brazilian law.

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